

## ABSTRACT OF THE DISCLOSURE

A novel electro-opto-mechanical assembly is provided. The electro-opto-mechanical assembly comprising: a first wafer, the wafer having a top and bottom surface; at least one optical element disposed on one surface of the first wafer; at least one discrete opto-electronic transducer element disposed on the bottom surface of the first wafer and in optical communication with the optical element; and an optical waveguide; wherein the first wafer and the optical element form an optical relay which relays light between the discrete opto-electronic transducer and the optical waveguide and thereby forms an efficient optical coupling between the discrete opto-electronic transducer and the optical waveguide.

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